(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 4 October 2001 (04.10.2001)

PCT

(10) International Publication Number WO 01/073109 A3

(51) International Patent Classification7: G01N 27/28, 27/30, 33/487, 27/403

C12Q 1/00,

[GB/GB]; 5 Stratherrick Gardens, Inverness 1V2 4LX

- (21) International Application Number: PCT/US01/10097
- (22) International Filing Date: 28 March 2001 (28.03.2001)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 09/537,599

28 March 2000 (28.03.2000)

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:

US

09/537,599 (CON)

Filed on 28 March 2000 (28.03.2000)

- (71) Applicant (for all designated States except US): DIA-BETES DIAGNOSTICS, INC. [US/US]; 51 Sawyer Road, Suite 150, Waltham, MA 02453 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): DAVIES, Oliver, William, Hardwicke [GB/GB]; 15 Drummond Circus, Inverness Circus, Inverness 1V2 4QP (GB). MCALEER, Jerome, Francis [GB/GB]; 52 Nobles Close, Grove Wantage OX12 ONR (GB). YEUDALL, Robert, Malcolm

- (74) Agents: SHAY, Bernard, E. et al.; LifeScan, Inc., 1000 Gibraltar Drive, Milpitas, CA 95035-6312 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CL, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

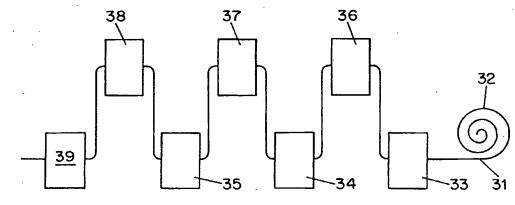
- with international search report
- (88) Date of publication of the international search report: 20 February 2003
- (15) Information about Correction:

Previous Correction:

see PCT Gazette No. 05/2002 of 31 January 2002, Section II

[Continued on next page]

(54) Title: CONTINUOUS PROCESS FOR MANUFACTURE OF DISPOSABLE ELECTRO-CHEMICAL SENSOR



(57) Abstract: Sensors formed from a substrate, an electrode layer and at least a first reagent layer are manufactured by transporting a continuous web of the substrate past at least two print stations, and printing the electrode layer and the first reagent layer on the substrate. One of the print stations prints the electrode layer on the continuous web of substrate, and the other of the print stations prints the first reagent layer on the continuous web of substrate as it is transported past the print stations. Additional print stations may be included for the printing of insulation layers, glue prints and the like. The order of printing will depend on the structure desired for the sensor, although the electrode layer(s) will frequently be deposited before the reagent layer(s).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

Interr Application No PCT/US 01/10097

A. CLASS IPC 7	SIFICATION OF SUBJECT MATTER C12Q1/00 G01N27/28 G01N27/	/30 G01N33/487 G01N	27/403						
According 1	to International Patent Classification (IPC) or to both national classification	fication and IPC							
B. FIELDS SEARCHED									
Minimum de IPC 7	documentation searched (classification system followed by classification ${\tt GO1N}$	ation symbols)							
	ation searched other than minimum documentation to the extent that	_							
	data base consulted during the international search (name of data b	base and, where practical, search terms used)) · · ·						
EPO-1n	nternal, WPI Data	·	. *						
C. DOCUM	IENTS CONSIDERED TO BE RELEVANT		· · · · · · · · · · · · · · · · · · ·						
Category *	Citation of document, with indication, where appropriate, of the re	relevant passages	Relevant to claim No.						
X	WO 98 43075 A (GIRAULT HUBERT HU ;LAGGER GREGOIRE (CH); LOYALL UW METR) 1 October 1998 (1998-10-01	NE (CH);	1-14,19, 20						
Y	the whole document		15-18						
Υ	US 5 679 311 A (SCHUESSLER RUDOL 21 October 1997 (1997-10-21)	•	15-18						
1	column 1, line 62 -column 4, lin	le 21							
A	US 4 218 421 A (MACK JOHN C JR 19 August 1980 (1980-08-19) column 2, line 48 -column 4, lin	· · · · · · · · · · · · · · · · · · ·	14-18						
		le 05							
i !									
Further documents are listed in the continuation of box C. Patent family members are listed in annex.									
	ategories of cited documents :	"T" later document published after the interr	national filing date						
conside	ent defining the general state of the art which is not tered to be of particular relevance document but published on or after the international tate	or priority date and not in conflict with the cited to understand the principle or the invention "X" document of particular relevance; the cia	ory underlying the						
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *C** *C**			te considered to ument is taken alone ulmed invention entive sten when the						
*O' document referring to an oral disclosure, use, exhibition or other means document is combined with one or more ments, such combination being obvious in the art. *P' document published prior to the international filing date but later than the priority date claimed *C* document member of the same patent tar			e other such docu- i to a person skilled						
	actual completion of the international search	Date of mailing of the international search							
	July 2002	15/07/2002	л герон						
Name and m	nailing address of the ISA	Authorized officer							
	European Patent Office, P.B. 5818 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nt,	_							
	Fax: (+31-70) 340-3016	Joyce, D							

INTERNATIONAL SEARCH REPORT

Interr Application No
PCT/US 01/10097

	Publication date		Patent family member(s)	•	Publication date
A	01-10-1998	EP			05-01-2000
		.WU	96430/5 	 N1	01-10-1998
Α	21-10-1997	DE	4326339	A1	09-02-1995
	•	EP	0637749	A2	08-02-1995
		JP	2610109	B2	14-05-1997
•		JP	7077528	Α	20-03-1995
		US	5609823	A	11-03-1997
Α	19-08-1980	NONE			
	A	A 01-10-1998 A 21-10-1997	A 01-10-1998 EP WO A 21-10-1997 DE EP JP JP US	A 01-10-1998 EP 0968416 W0 9843075 A 21-10-1997 DE 4326339 EP 0637749 JP 2610109 JP 7077528 US 5609823	A 01-10-1998 EP 0968416 A1 WO 9843075 A1 A 21-10-1997 DE 4326339 A1 EP 0637749 A2 JP 2610109 B2 JP 7077528 A US 5609823 A